CLAIMS

SUB A1

1. Writing process, in which said material is irradiated by means of a beam of light ions, such as He^+ ions, having an energy of the order of or less than a hundred keV, characterized in that this material is a thin-layer material comprising buried layers deposited on a substrate, and in that one or more regions having sizes of the order of 1 micrometer or less are irradiated, the irradiation dose being controlled so as to be a few 10^{16} ions/cm^2 or less, the irradiation modifying the composition of atomic planes in the material at an interface between two layers of the latter.

2. Process according to claim 1, characterized in that the irradiation is carried out through a mask.

3. Process for the magnetic or magnetooptic recording of binary information, especially for the production of discrete magnetic materials, of magnetic memory circuits or of magnetically-controllable logic circuits, characterized in that it employs a writing process according to one of the preceding claims.

4. Optical recording process of the read-only memory type, characterized in that it employs a writing process according to either of claims 1 and 2.

5. Process according to either of claims 5 and 6, characterized in that the recording material is a magnetic multilayer material, the individual layers of which are pure metals or transition metal alloys or rare earth alloys.

6. Process for producing magnetically-controllable optical circuits using a controlled variation of the optical index component associated with magnetism, characterized in that it employs a writing process according to either of claims 1 and 2.

Add A2 C2